

LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

Volume 5 | Technical Appendices

CFA23 | Balsall Common and Hampton-in-Arden

Baseline (SV-002-023)

Sound, noise and vibration

November 2013

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Appendix SV-002-023

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Baseline	002
Community forum area:	Balsall Common and Hampton-in-Arden	023

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1 Introduction

1.1 Structure of the sound, noise and vibration appendices

1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas.

1.1.2 For the Balsall Common and Hampton-in-Arden area (CFA23), the other three sections are as follows:

- baseline sound, noise and vibration (Volume 5: Appendix SV-002-023) (this appendix);
- construction sound, noise and vibration (Volume 5: Appendix SV-003-023); and
- operational sound, noise and vibration (Volume 5: Appendix SV-004-023).

1.1.3 Maps referred to within this appendix are contained in the Volume 5 map book.

1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

1.2 Existing acoustic environment

1.2.1 The sound climate of this area reflects the mix of usage and activity in the area ranging from the larger residential communities of Balsall Common and Hampton-in-Arden to a number of smaller communities and relatively isolated residences and farms. The significant sound sources which traverse the area are the M42 and A45 Coventry Road (in the north-west of the area), the A452 Kenilworth Road (which traverses the whole area from north-west to south-east), the Rugby to Birmingham line crossing the central part of the area, and the overflying aircraft using Birmingham Airport. Away from these major sources the sound climate is one of local road traffic, agricultural activities, and in quieter areas the sound of animals and birdsong, although few areas escape occasional aircraft noise.

1.2.2 In the vicinity of Balsall Common, baseline sound levels are mixed. Close to the A452 Kenilworth Road, sound from this road dominates, but away from this road, local sources are more significant, including local roads, and the Rugby to Birmingham line in areas around Berkswell station. During the night-time the same sources generally contribute, with night-time sound levels dropping significantly in areas away from the major roads.

1.2.3 Within Berkswell village, existing sound levels are generally low with agricultural sound sources and local road traffic being the main significant contributors.

1.2.4 Following the A452 Kenilworth Road to the north of Balsall Common, sound from this road is generally dominant, although at the numerous more isolated properties away from this road, levels are significantly lower. Locations to the south west of the railway embankment carrying the Rugby to Birmingham line, are generally shielded from noise from the A452 Kenilworth Road by this embankment.

- 1.2.5 Within Hampton-in-Arden, background sound levels are dominated by distant road traffic from the A452 Kenilworth Road and M42, with the main roads through the village (particularly Meriden Road), contributing significantly. As the Rugby to Birmingham line is located in a cutting through the village, this generally only contributes significantly to baseline sound levels close to the railway itself. Aircraft approaching/departing from Birmingham Airport are also regularly audible within Hampton-in-Arden, although these are rarely the dominant sound source.
- 1.2.6 To the north of Hampton-in-Arden, existing sound levels are dominated by the major roads which meet in this area, specifically the M42, A45 Coventry Road and A452 Kenilworth Road. In these areas the reduction in sound levels during the night time is generally less due to the continuous nature of these sound sources.

2 Scope, assumptions and limitations

2.1 Sound and vibration sensitive receptors

2.1.1 Within the Balsall Common and Hampton-in-Arden area, 118 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the detailed maps in map series SV-03 and SV-04 (Volume 5: Map Book Sound, noise and vibration). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

2.2 Local engagement

2.2.1 Discussions have been held with representatives of Solihull Metropolitan Borough Council (SMBC) regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.

2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and reported in this document.

2.2.3 Representatives of SMBC have also attended baseline sound measurements in this area and witnessed the measurement procedures used.

2.2.4 Local engagement through community forum meetings has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and influenced the monitoring undertaken and reported in this document.

2.3 Existing baseline sound monitoring locations

2.3.1 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in map series SV-03 and SV-04 (Volume 5: Map Book Sound, noise and vibration).

3 Environmental baseline

3.1 Existing baseline data collection methodology

3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.

3.1.2 Over the Balsall Common and Hampton-in-Arden area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:

- long-term measurements – unattended measurements of several days duration ;
- medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
- short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).

3.1.3 A total of 104 baseline sound monitoring locations have been used within this area, with further measurements from just outside of the area also being used to provide information on baseline sound levels.

3.1.4 At the southern end of the area, covering Balsall Common and Carol Green, seven day unattended baseline sound monitoring was undertaken at ten locations, with further satellite short-term measurements undertaken at a large number of locations throughout the area. Long-term measurements were undertaken either at residential noise sensitive properties, or in nearby locations where baseline sound levels were representative of those at surrounding properties. The satellite measurements were undertaken simultaneously with the longer duration monitoring to allow good correlation between the two sites. The satellite measurements were made at a wide range of publically accessible locations where sound levels were representative of those at nearby sensitive receptors. Measurements were made at each satellite monitoring location at several times of the day and night.

3.1.5 In Berkswell village, one long-term monitoring location has been used, to the southern end of the village, and short-term measurements have been undertaken at a number of locations through the village, with each site being visited several times (including both day and night-time). The 24-hour time history from the long-term monitoring location has been used to calculate daytime and night-time (16hr and 8hr) sound levels from the short-term measurements.

3.1.6 In areas surrounding the A452 Kenilworth Road to the north-west of Balsall Common, the baseline sound climate varies significantly with distance from the A452 Kenilworth Road and with screening from the railway embankment around Bradnocks Marsh. To the south-west of this rail embankment, one seven-day sound measurement was made, supplemented with a series of satellite measurements over the surrounding areas during both day and night-times. To the north-east of the railway, baseline sound levels are

generally dominated by the A452 Kenilworth Road, and measurements were undertaken at one long-term location adjacent to this road. Shorter (day and night-time) satellite measurements at a number of locations in the surrounding area representative of the noise sensitive receptors were made. All satellite measurements were undertaken simultaneously with the longer duration monitoring to allow good correlation between the two locations.

- 3.1.7 To the north and east of the A452 Kenilworth Road, between Berkswell and the A45 Coventry Road, there are a number of isolated properties in rural settings. A further five long-term monitoring locations have been used over the area to the north of the A452 Kenilworth Road at these locations, and further short-term measurements undertaken during both day and night-times at publically accessible locations have been used to supplement these. The 24hr time histories from nearby long-term measurements have been used to calculate 16hr and 8hr sound levels from the shorter-term measurements.
- 3.1.8 Baseline measurements within Hampton-in-Arden have been undertaken in three distinct areas. There was a long-term measurement location in fields on the eastern edge of the village, with short duration satellite measurements close to noise sensitive receptors. For the areas of Hampton-in-Arden closer to the railway, baseline sound levels have been determined using a long-term measurement location to the rear of a residential property further into the village. A series of short duration satellite measurements throughout the village were also used. An additional long-term measurement off The Crescent in Hampton-in-Arden has been used to provide baseline sound levels for properties in this area.
- 3.1.9 Within all areas in Hampton-in-Arden, satellite measurements were undertaken simultaneously with the associated longer duration monitoring to allow good correlation between the two locations, and covered a wide range of locations on public land where sound levels were representative of those at nearby sensitive receptors. Each satellite monitoring location was visited at several times of the day and night.
- 3.1.10 At the northern end of this area, the baseline is dominated by sound from the M42, A45 Coventry Road and A452 Kenilworth Road. For assessment locations close to the junctions of these major roads, baseline sound levels have been calculated using data from a long-term monitoring location in the Middle Bickenhill area. Shorter-term satellite measurements were undertaken during both day and night-time at locations close to sensitive receptors near to these major transportation sound sources. The shorter-term measurements were undertaken at the same time as at the seven day location in Middle Bickenhill.
- 3.1.11 Additional long-term measurements were also made at three additional locations at more isolated properties towards the northern end of the area where the monitoring locations described above did not provide sufficient coverage.

3.2 Existing baseline sound levels

1.1.5 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:

- Baseline levels used for the operational sound assessment;
 - $L_{pAeq,16hr}$ weekday daytime (07:00-23:00) sound pressure level;
 - $L_{pAeq,8hr}$ weekday night-time (23:00-07:00) sound pressure level;
 - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
 - highest $L_{pAFmax,5min}$ night-time sound pressure level.
- Baseline levels used for the construction sound assessment;
 - Daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
 - Evening / weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00-23:00; Sunday 07:00-23:00);
 - Night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00);

3.2.1 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in Volume 5: Appendix SV-001-000. .

Table 1: Existing baseline sound levels

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ¹	
			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
98826	Old Station Road, Hampton-In-Arden, Solihull	WM1903	58.8	55.4	59.5	65.1	60.2	58.2	56.0	2,A,ii,b	
158820	Riddings Hill, Balsall Common, Coventry	WM0607	49.3	38.7	41.6	50.5	51.2	47.3	39.2	3,A,ii,b	
159179	Grovefield Crescent, Balsall Common, Coventry	WM0607	49.3	38.7	41.6	50.5	51.2	47.3	39.2	3,A,i,b	
160582	Station Road, Balsall Common, Coventry	WM0604	61.1	47.1	58.5	81.1	62.5	63.7	48.4	2,A,ii,b	
161143	Marsh Lane, Bradnocks Marsh, Solihull	WM1504	48.4	48.9	61.0	68.9	50.4	46.8	49.8	2,A,ii,b	
161181	Marsh Lane, Bradnocks Marsh, Solihull	WM1605	53.7	45.3	48.4	51.0	54.4	52.1	45.3	2,A,ii,b	
161197	Marsh House Farm Lane, Bradnocks Marsh, Solihull	WM1505 and WM1503	57.3	55.6	71.3	85.8	59.3	55.7	56.4	2,A,ii,b	
161290	Wootton Lane, Balsall Common, Coventry	WM1507	57.3	45.2	53.9	76.8	59.3	55.7	46.1	2,A,ii,b	
161370	Wootton Green Lane, Balsall Common, Coventry	WM1501	51.3	43.5	51.3	78.5	53.4	49.8	44.3	1,A,ii,a	
161426	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM9902	58.2	51.3	61.9	84.3	59.3	56.9	51.1	1,A,ii,a	
161465	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM1608	72.5	64.3	83.0	88.2	73.1	70.9	64.3	2,A,i,b	
161483	A452 Kenilworth Road, Hampton-In-Arden,	WM1601	58.5	52.2	63.2	77.7	59.1	56.9	52.2	1,A,ii,a	

¹ provides a data source coding key.

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ¹	
			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
	Solihull										
161504	Bradnocks Marsh Lane, Hampton-In-Arden, Solihull	WM1503	63.2	55.6	71.3	85.8	65.3	61.7	56.4	2,A,ii,b	
161646	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM1602	61.0	57.9	67.0	75.1	61.6	59.3	57.8	2,A,ii,b	
161734	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM1603	57.1	51.6	55.3	60.5	57.8	55.5	51.6	2,A,ii,b	
164673	Wootton Green Lane, Balsall Common, Coventry	WM1302	49.6	35.8	50.5	53.7	51.6	48.1	36.6	3,A,ii,b	
164793	A452 Kenilworth Road, Balsall Common, Coventry	WM1301	63.7	53.5	72.3	75.2	65.7	62.2	54.3	3,A,ii,b	
164857	A452 Kenilworth Road, Balsall Common, Coventry	WM1302	49.6	35.8	50.5	53.7	51.6	48.1	36.6	3,A,ii,b	
164947	A452 Kenilworth Road, Balsall Common, Coventry	WM0610	46.4	28.8	50.0	55.8	48.4	44.4	29.3	3,A,ii,b	
167012	Ashley Way, Balsall Common, Coventry	WM1304	46.0	38.8	50.3	64.3	48.0	44.5	39.6	3,A,ii,b	
167652	Wilmot Close, Balsall Common, Coventry	WM0609	51.0	45.3	42.3	52.9	52.9	48.9	45.8	3,A,ii,b	
167669	Whitehead Grove, Balsall Common, Coventry	WM1304	46.0	38.8	50.3	64.3	48.0	44.5	39.6	3,A,ii,b	
167728	A452 Kenilworth Road, Balsall Common, Coventry	WM9902	58.2	51.3	61.9	84.3	59.3	56.9	51.1	1,A,ii,a	

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ¹	
			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
167743	Wootton Lane, Balsall Common, Coventry	WM1501	51.3	43.5	51.3	78.5	53.4	49.8	44.3	1,A,ii,a	
167781	Park Lane, Berkswell, Coventry	WM9905	49.9	42.5	48.3	95.1	51.1	48.5	44.5	1,A,i,a	
167793	Wootton Green Lane, Balsall Common, Coventry	WM1506	54.1	48.9	56.2	68.7	56.1	52.5	49.7	2,A,ii,b	
167824	A452 Kenilworth Road, Balsall Common, Coventry	WM9902	58.2	51.3	61.9	84.3	59.3	56.9	51.1	1,A,ii,a	
167944	A452 Kenilworth Road, Balsall Common, Coventry	WM1303	71.3	68.5	83.2	83.6	73.3	69.7	69.3	3,A,ii,b	
168004	Lavender Hall Lane, Berkswell, Coventry	WM9904	47.5	38.9	48.1	72.9	48.9	46.8	39.8	1,A,ii,a	
168133	B4102 Meriden Road, Berkswell, Coventry	WM9906	45.0	38.9	54.3	73.6	46.6	46.0	40.7	1,A,ii,a	
168832	B4101 Waste Lane, Balsall Common, Coventry	WM1201	51.5	42.0	51.6	71.5	52.8	48.5	43.1	1,A,ii,a	
170892	Barretts Lane, Balsall Common, Coventry	WM0603	50.6	37.1	39.5	46.2	52.0	53.2	38.4	2,A,ii,b	
171148	Barretts Lane, Balsall Common, Coventry	WM0601	45.8	38.3	47.1	73.5	47.1	48.4	39.6	1,A,ii,a	
171253	Meeting House Lane, Balsall Common, Coventry	WM1305	55.5	45.8	68.1	74.6	57.5	54.0	46.6	3,A,ii,b	
171441	Kelsey Lane, Balsall Common, Coventry	WM1201	51.5	42.0	51.6	71.5	52.8	48.5	43.1	1,A,ii,a	
172124	Meeting House Lane, Balsall Common, Coventry	WM0603	50.6	37.1	39.5	46.2	52.0	53.2	38.4	2,A,ii,b	
172177	Station Road, Balsall Common, Coventry,	WM0605	62.9	50.9	62.4	70.2	64.2	65.5	52.2	2,A,ii,b	

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			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAmax,5min}$	Highest night-time $L_{pAmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
172357	Station Road, Balsall Common, Coventry	WM0604	61.1	47.1	58.5	81.1	62.5	63.7	48.4	2,A,ii,b	
172441	Sunnyside Lane, Balsall Common, Coventry	WM0603	50.6	37.1	39.5	46.2	52.0	53.2	38.4	2,A,ii,b	
172667	Sunnyside Lane, Balsall Common, Coventry	WM0603	50.6	37.1	39.5	46.2	52.0	53.2	38.4	2,A,ii,b	
172826	Sunnyside Lane, Balsall Common, Coventry	WM0601	45.8	38.3	47.1	73.5	47.1	48.4	39.6	1,A,ii,a	
172901	Station Road, Balsall Common, Coventry	WM0604	61.1	47.1	58.5	81.1	62.5	63.7	48.4	2,A,ii,b	
172944	Station Road, Balsall Common, Coventry	WM9914	51.3	48.5	55.5	79.8	53.1	52.8	49.8	1,A,ii,a	
172965	Truggist Lane, Berkswell, Coventry	WM0804	53.0	44.7	52.0	57.5	56.2	54.3	45.3	2,A,ii,b	
173014	Station Road, Balsall Common, Coventry	WM0610	46.4	28.8	50.0	55.8	48.4	44.4	29.3	3,A,ii,b	
173082	Station Road, Balsall Common, Coventry	WM0607	49.3	38.7	41.6	50.5	51.2	47.3	39.2	3,A,ii,b	
173151	Station Road, Balsall Common, Coventry	WM9914	51.3	48.5	55.5	79.8	53.1	52.8	49.8	1,A,ii,a	
173170	Station Road, Balsall Common, Coventry	WM9914	51.3	48.5	55.5	79.8	53.1	52.8	49.8	1,A,ii,a	
173192	Truggist Lane, Berkswell, Coventry	WM0804	53.0	44.7	52.0	57.5	56.2	54.3	45.3	2,A,i,b	
173225	Truggist Lane, Berkswell, Coventry	WM0801	51.1	41.8	48.8	79.3	54.2	52.4	42.3	1,A,ii,a	
173259	Beverley Close, Balsall Common, Coventry	WM0601	45.8	38.3	47.1	73.5	47.1	48.4	39.6	1,A,ii,a	
173395	Station Road, Balsall Common, Coventry	WM9914	51.3	48.5	55.5	79.8	53.1	52.8	49.8	1,A,ii,a	
173409	Grovefield Crescent, Balsall Common, Coventry	WM0608	53.9	45.2	43.5	55.5	55.8	51.9	45.8	3,A,i,b	
173544	Lavender Hall Lane, Berkswell, Coventry	WM9909	50.3	41.3	50.5	79.6	52.0	48.8	43.4	1,A,i,a	

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ¹	
			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAmax,5min}$	Highest night-time $L_{pAmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
173557	Baulk Lane, Berkswell, Coventry	WM9903	51.3	43.1	49.6	76.6	53.3	49.5	44.7	1,A,ii,a	
174003	Lavender Hall Lane, Berkswell, Coventry	WM9909	50.3	41.3	50.5	79.6	52.0	48.8	43.4	1,A,ii,a	
174338	Spencers Lane, Berkswell, Coventry	WM1401	44.4	42.5	51.8	59.9	46.0	42.9	44.6	3,A,i,b	
174501	Watson Way, Balsall Common, Coventry	WM9908	53.6	50.2	56.1	80.5	55.6	51.6	50.7	1,A,ii,a	
174675	Wilmot Close, Balsall Common, Coventry	WMo609	51.0	45.3	42.3	52.9	52.9	48.9	45.8	3,A,ii,b	
174783	Eborne Croft, Balsall Common, Coventry	WMo609	51.0	45.3	42.3	52.9	52.9	48.9	45.8	3,A,ii,b	
175211	Bradnocks Marsh Lane, Hampton-In-Arden, Solihull	WM1502	59.5	51.9	62.1	79.5	61.5	57.9	52.7	2,A,i,b	
175336	Turnpike Close, Balsall Common, Coventry	WMo610	46.4	28.8	50.0	55.8	48.4	44.4	29.3	3,A,ii,b	
175597	Grovefield Crescent, Balsall Common, Coventry	WMo609	51.0	45.3	42.3	52.9	52.9	48.9	45.8	3,A,ii,b	
175827	Lavender Hall Lane, Berkswell, Coventry	WM1401	44.4	42.5	51.8	59.9	46.0	42.9	44.6	3,A,ii,b	
176022	Church Lane, Berkswell, Coventry	WM1403	49.9	38.0	46.6	51.9	51.6	48.5	40.1	3,A,ii,b	
176128	Mercote Hall Lane, Meriden, Coventry	WM9906	45.0	38.9	54.3	73.6	46.6	46.0	40.7	1,A,ii,a	
176243	Pasture Farm, Diddington Lane, Hampton-in-Arden	WM9911	54.4	50.5	56.8	81.1	55.4	52.6	51.0	1,A,i,a	
178468	Diddington Lane, Hampton-In-Arden, Solihull	WMo003	62.7	51.3	72.1	74.2	63.3	63.0	51.6	2,A,ii,b	
178545	B4102 Meriden Road, Hampton-In-Arden, Solihull	WMo005	56.3	45.1	55.9	57.9	56.8	56.6	45.4	2,A,ii,b	

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding ¹	
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178766	B4102 Meriden Road, Hampton-In-Arden, Solihull	WM1702	67.0	58.5	74.6	77.0	68.5	66.7	60.4	2,A,ii,b	
179003	B4102 Meriden Road, Hampton-In-Arden, Solihull	WM1701	49.1	43.7	50.8	72.4	50.6	48.8	45.5	1,A,ii,a	
179084	B4102 Meriden Road, Hampton-In-Arden, Solihull	WM0005	56.3	45.1	55.9	57.9	56.8	56.6	45.4	2,A,ii,b	
179119	The Crescent, Hampton-In-Arden, Solihull	WM9913	49.9	42.8	50.3	76.4	51.6	49.2	44.1	1,A,ii,a	
179384	The Crescent, Hampton-In-Arden, Solihull	WM1703	49.3	47.0	59.6	60.8	50.8	49.0	48.9	2,A,ii,b	
180256	The Crescent, Hampton-In-Arden, Solihull	WM9913	49.9	42.8	50.3	76.4	51.6	49.2	44.1	1,A,ii,a	
180470	Nesfield Grove, Hampton-In-Arden, Solihull	WM9913	49.9	42.8	50.3	76.4	51.6	49.2	44.1	1,A,ii,a	
180567	Lapwing Drive, Hampton-In-Arden, Solihull	WM0007	47.6	39.6	44.6	49.1	48.2	47.9	39.9	2,A,ii,b	
180759	Nesfield Grove, Hampton-In-Arden, Solihull	WM0006	51.0	39.1	47.4	56.2	51.6	51.3	39.5	2,A,ii,b	
180945	Old Station Road, Hampton-In-Arden, Solihull	WM1902	57.4	49.6	52.7	57.0	58.7	56.8	50.2	2,A,ii,b	
181687	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM1604	56.6	48.5	57.2	62.0	57.3	55.0	48.4	2,A,ii,b	
181780	Diddington Lane, Hampton-In-Arden, Solihull	WM0001	48.8	43.2	51.4	80.2	49.3	49.1	43.5	1,A,ii,a	
181854	Diddington Lane, Hampton-In-Arden, Solihull	WM0001	48.8	43.2	51.4	80.2	49.3	49.1	43.5	1,A,ii,a	
181976	B4102 Meriden Road, Hampton-In-Arden, Solihull	WM9901	42.3	35.6	36.3	69.7	44.0	42.5	36.8	1,A,ii,a	

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182018	A452 Kenilworth Road, Meriden, Coventry	WM9901	42.3	35.6	36.3	69.7	44.0	42.5	36.8	1,A,ii,a	
182073	Diddington Lane, Meriden, Coventry	WM1907	53.4	50.5	57.2	58.7	54.4	51.7	51.2	3,A,ii,b	
182120	Diddington Lane, Meriden, Coventry	WM3801	53.1	50.4	57.0	86.4	54.3	51.3	50.9	1,A,ii,a	
182139	A452 Kenilworth Road, Meriden, Coventry	WM9916	50.7	46.2	53.3	79.1	51.7	48.2	46.5	1,A,ii,a	
182427	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM9906	45.0	38.9	54.3	73.6	46.6	46.0	40.7	1,A,ii,a	
182461	A452 Kenilworth Road, Hampton-In-Arden, Solihull	WM9912	49.4	43.5	51.6	81.0	51.4	46.4	45.2	1,A,ii,a	
182587	Cornets End Lane, Meriden, Coventry	WM9915	52.0	46.7	54.9	78.4	53.3	50.7	47.1	1,A,ii,a	
200232	Old Waste Lane, Balsall Common, Coventry	WM1001	45.2	38.5	48.4	72.8	47.0	47.0	40.0	1,A,ii,a	
202158	Truggist Lane, Berkswell, Coventry	WM9907	46.7	37.9	45.7	79.7	49.1	42.2	39.6	1,A,ii,a	
202319	Hob Lane, Balsall Common, Coventry	WM9910	45.9	41.5	48.7	89.4	47.4	44.2	41.9	1,A,ii,a	
202645	Hob Lane, Balsall Common, Coventry	WM9910	45.9	41.5	48.7	89.4	47.4	44.2	41.9	1,A,ii,a	
203030	Old Waste Lane, Balsall Common, Coventry	WM1001	45.2	38.5	48.4	72.8	47.0	47.0	40.0	1,A,ii,a	
203125	Old Waste Lane, Balsall Common, Coventry	WM1001	45.2	38.5	48.4	72.8	47.0	47.0	40.0	1,A,ii,a	
203260	Spencers Lane, Berkswell, Coventry	WM1106	67.1	51.0	68.4	76.5	68.8	65.8	52.6	2,A,ii,b	
203285	Spencers Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,ii,a	
203382	Truggist Lane, Berkswell, Coventry	WM1103	50.9	45.1	53.3	70.0	52.6	49.7	46.6	2,A,ii,b	

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203420	ruggist Lane, Berkswell, Coventry	WM1103	50.9	45.1	53.3	70.0	52.6	49.7	46.6	2,A,ii,b	
203453	Truggist Lane, Berkswell, Coventry	WM0801	51.1	41.8	48.8	79.3	54.2	52.4	42.3	1,A,ii,a	
203499	Truggist Lane, Berkswell, Coventry	WM1102	52.2	44.1	53.9	70.3	53.9	51.0	45.6	2,A,ii,b	
203578	Hodgetts Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,ii,a	
203600	Hodgetts Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,ii,a	
203611	Hodgetts Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,ii,a	
203706	Hodgetts Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,i,a	
203737	Hodgetts Lane, Berkswell, Coventry	WM1101	45.5	37.0	45.5	78.1	47.2	44.3	38.6	1,A,i,a	
203770	Hodgetts Lane, Berkswell, Coventry	WM1102	52.2	44.1	53.9	70.3	53.9	51.0	45.6	2,A,ii,b	
203808	Truggist Lane, Berkswell, Coventry	WM1103	50.9	45.1	53.3	70.0	52.6	49.7	46.6	2,A,ii,b	
203998	Baulk Lane, Berkswell, Coventry	WM1406	53.3	34.4	48.9	53.9	55.6	48.8	36.1	3,A,ii,b	
700550	Meeting House Lane, Balsall Common	WM0603	50.6	37.1	39.5	46.2	52.0	53.2	38.4	2,A,ii,b	
700551	Baulk Lane, Berkswell	WM0801	51.1	41.8	48.8	79.3	54.2	52.4	42.3	1,A,i,a	
700552	A452 Kenilworth Road, Balsall Common	WM9902	58.2	51.3	61.9	84.3	59.3	56.9	51.1	1,A,ii,a	
700554	Berkswell Hall, Berkswell	WM9906	45.0	38.9	54.3	73.6	46.6	46.0	40.7	1,A,ii,a	
700555	A452 Kenilworth Road, Balsall Common	WM1602	61.0	57.9	67.0	75.1	61.6	59.3	57.8	2,A,ii,b	
700556	A452 Kenilworth Road, Balsall Common	WM1601	58.5	52.2	63.2	77.7	59.1	56.9	52.2	1,A,ii,a	

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			For operational sound assessment				For construction sound assessment				
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}		
700565	Balsall Common	WM0802	63.0	50.2	55.4	70.2	66.1	64.3	50.7	2,A,ii,b	
700567	Pasture Farm, Diddington Lane, Hampton-in-Arden	WM9911	54.4	50.5	56.8	81.1	55.4	52.6	51.0	1,A,i,a	

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study ² or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Defra noise maps ³ , etc.).
7	Generic levels

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied.

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

3.3 Future baseline methodology

Construction

3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound

² Building Research Establishment (BRE), (2002), *National Noise Incidence Study*, 2000/2001.

³ Department for Environment, Food and Rural Affairs (Defra); *Noise Mapping England*; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.

3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.

3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

Operation

3.3.4 Changes in existing sound sources between 2012/2013 and 2026 may result in changes to baseline sound levels.

3.3.5 For major transportation sources, data for existing and future baseline operations have been reviewed. Where changes may occur between the existing baseline and future baseline (2026) situations, expected changes in baseline sound level have been derived. For example, expected changes in traffic flow, composition and speed have been used to calculate changes in sound emission from roads using the methodology from the Calculation of Road Traffic Noise⁴.

3.3.6 The changes to major sound sources which have been identified in this area are summarised in Table 3.

Table 3: 2026 future baseline changes in sound sources

Sound Source affected	Cause of change in levels	Change in sound levels (existing baseline to 2026 future baseline) (dB)	
		Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$
Diddington Lane, Hampton-in-Arden	Increased traffic flow	+2.4	+2.4
B4102 Meriden Road, Hampton-in-Arden	Increased traffic flow	+1.7	+1.7
Hampton Lane	Increased traffic flow	+1.7	+1.7
Cornets End Lane, Meriden	Increased traffic flow	+1.9	+1.9

⁴ Department of Transport, (1988), *Calculation of Road Traffic Noise*.

4 References

Building Research Establishment (BRE), (2002), *National Noise Incidence Study 2000/2001*.

Defra, Noise Mapping England, <http://services.defra.gov.uk/wps/portal/noise/>; Accessed 26 July 2013.

Department of Transport, (1988), *Calculation of Road Traffic Noise*.